

REFLEX IQ-LOGGER™ success at multiple sites

CASE STUDY

The REFLEX IQ-LOGGER™ is the latest in core logging technology. The device is defining new processes of structural logging and revolutionising the data collection and interpretation practises of past.

Mawson Resources Finland Project

Mawson Resources were involved in a drilling campaign in Finland where the core and orientation line were in excellent condition, but the rocks were structurally complex and interpretations by traditional methods impossible to do in the time required.

Solution

In the nine month drilling campaign, the Mawson Resources team implemented the REFLEX IQ-LOGGER™ in the data collection process, allowing them to make timely structural interpretations to guide the exploration program.

The REFLEX IQ-LOGGER™ allowed the team to rapidly make core observations and structural measurements whilst in the core shed and then be able to identify fabric and folding patterns in real-time and match them with the geophysical interpretation. This allowed them to rapidly prioritise the selection of areas for detailed 3D analysis.

Results

Using the REFLEX IQ-LOGGER™ resulted in a significant improvement in structural logging efficiency and timeliness, with data being captured quickly and decision points reached sooner.



The timely integration of structural observations with 3D geophysical interpretation enabled real-time prioritisation of the drilling program, which significantly aided the project.

"The geologists are still using the REFLEX IQ-LOGGER™ and now understand the need to classify the data as it comes in, so that the final data is accurate and can be interpreted" shared Nick Oliver, HCOV Global.

"The IQ-LOGGER™ was in it's element here, because daily we had to quickly select a fan of holes from the geophysics whilst trying to reconstruct refolded fold patterns."
– Nick Oliver, HCOV Global

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Mongolian Project

An Australian exploration company had a project in Mongolia where the core quality and data quality was variable, with a significant number of holes either not orientated or drilled close to vertical. Also, a large number of the fault structures were sub parallel and previous logging did not adequately classify them.

“The role of the IQ-LOGGER™ in the total workflow was crucial.”

– Nick Oliver, HCOV Global

Solution

The implementation of the REFLEX IQ-LOGGER™ was critical in this situation since the REFLEX IQ-LOGGER™ accurately measures sub-parallel faults which traditional tools struggle to do.

In addition to its capability to measure awkward structures, the REFLEX IQ-LOGGER™ also eliminates the errors caused by misuse of traditional tools, such as 180 degree beta angle errors, since the device can reliably measure the structure's orientation from any angle. The use of the REFLEX IQ-LOGGER™ significantly improved the integrity and quality of the data.

Results

The client was very pleased with the result since the geologist was able to use the REFLEX IQ-LOGGER™ data to improve the integrity of the structural model for the project. Continued use of the REFLEX IQ-LOGGER™ in the project is planned.

Further benefit was received by integrating the REFLEX IQ-LOGGER™ structural measurements with IMDEX ioGAS™ and a 3D modelling package. This enabled a robust fault classification to be created in real time. This was done using a combination of intensity, orientation, litho geochemistry offset, and fault specific metal associations.

The use of the REFLEX IQ-LOGGER™ significantly improved the integrity and quality of the data and improved workflow efficiency.

Significance for Industry

The REFLEX IQ-LOGGER™ is changing the practise of structural logging from traditional methods. By improving the accuracy and integrity of data collected it is allowing robust interpretations to be made. The rapid data collection from the use of the REFLEX IQ-LOGGER™ enables the user to make confident decisions, faster.

Further Information

For more information about this case study, please contact reflex@imdexlimited.com or your local REFLEX representative.



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